Pesticide Review

News About Pesticides & Regulations

March 2007

Volume 20, No. 2

Disposing of Household Hazardous Waste

Spring is finally here, and with it comes spring cleaning. It's a good time of year to sort through all you've accumulated and evaluate the need of those items. Some of those items may include pesticides and various other chemicals. Does the half-full gallon of nearly neon green paint sitting in your garage come to mind? Painting the nursery bright (blinding) green sounded like a good idea at the time! Perhaps it's the cylinder of fungicide powder you bought to treat the black spot on your roses. Over the years, the black spot problems passed—as did your roses.

Of course, it's best to prevent storing excess pesticides simply by buying smaller containers. Buy only what you need for the season. Unlike fine wine, pesticides don't get better with age. Many tend to lose their effectiveness after a few years. However, prevention won't solve your current overstocked situation. Fortunately, you have a few options for disposing of your old, unwanted pesticides.

1. **Use them up.** You can *usually* apply them to a labeled-use site regardless of whether pests are present or not. Be sure to read and follow all label directions. Sometimes pesticides are taken off the market, or certain uses are removed from the label. In those cases, existing stocks can typically still be used. Rarely does U.S. EPA order a stop-use on the product. For example, it is illegal to apply old stocks of chlordane or 2,4,5-T. To learn about the registration status of your product in question, you can contact the manufacturer or the Illinois Department of Agriculture, (217)785-2427.
2. **Give them away.** Fellow neighboring gardeners may be interested in your castoffs. It's *not* recommended that you sell unwanted pesticides. To sell a pesticide legally, if must still be in the original packaging with the complete label. If the pesticide is restricted use, you must be licensed in order to sell it. If the product registration has been cancelled, selling is illegal.
3. **Take them to a hazardous waste collection event.** The Illinois Environmental Protection Agency (IEPA) has scheduled 10 household hazardous waste (HHW) collection events to be held across Illinois this spring.

UNIVERSITY OF ILLINOIS EXTENSION

University of Illinois • U.S. Department of Agriculture
Local Extension Councils Cooperating

The Illinois Poison Center's Web site (http://www.mchc.org/ipc/) has the following list of what is and is not accepted at a collection site. Use this list as a guide, but it may be best to call first if in doubt. Generally, chemical waste has packaging that contains the words **"danger," "toxic," "flammable," "corrosive,"** and/or **"reactive."** Please note that fungicides and insecticides are considered to be garden/lawn chemicals. They were likely listed separately in the table for clarification. Likewise, herbicides (including crabgrass preventers) must have been overlooked, but I'm certain they are accepted at HHWs as well.

Materials ACCEPTED at HHW collections:
oil-based paint
solvents
old prescriptions
motor oil
household cleaners
household batteries
antifreeze
pool chemicals
asbestos
garden/law chemicals
old gasoline
fungicides
metal polishes
paint remover
insecticides
drain cleaner
aerosol products
hobby chemicals
mercury (including thermometers and thermostats)

Materials NOT ACCEPTED at HHW collections:
business wastes
tires
propane tanks
explosives/ammunition
fire extinguishers
lead-acid batteries
latex paint
agricultural chemicals
fireworks
smoke detectors
medical wastes

2007 Collection Schedule

Date	Location	Address	Cosponsor(s)
March 17 8 a.m. – 3 p.m.	Dixon Lee County	Dixon High School Parking Lot 315 Lincoln Statue Drive	Lee County Solid Waste
April 14 8 a.m. – 3 p.m.	Cambridge Henry County	Henry County Fairgrounds E. North Street	Henry County Farm Bureau
April 21 8 a.m. – 3 p.m.	Springfield Sangamon County	Illinois State Fairgrounds (Enter Gate 11.) off Sangamon	Sangamon County, City of Springfield
April 21 8 a.m. – 3 p.m.	Mt. Carroll Carroll County	Carroll County Highway Department 10735 Mill Road	Jo-Caroll Solid Waste, U of I Extension, Carroll County Health Department
April 28 8 a.m. – 3 p.m.	Chicago Cook County	DeVry Technical Institute 3300 North Campbell	Chicago Department of Environment
May 5 8 a.m. – 3 p.m.	Shaumburg Cook County	Schaumburg High School 1100 W. Schaumburg Road	Metropolitan Water Reclamation District of Great Chicago
May 5 8 a.m. – 3 p.m.	Sycamore DeKalb County	Dekalb County Farm Bureau 1350 W. Prairie Drive	DeKalb County Farm Bureau
May 19 8 a.m. – 3 p.m.	Norris City White County	Norris City Parking Lot 103 E. Main Street	Egyptian Health Department, Village of Norris
May 19 8 a.m. – 3 p.m.	St. Charles Kane County	Kane County Fairgrounds (Enter on Oak Street west of Randall Road.)	Kane County Department of Environment
June 2 8 a.m. – 3 p.m.	Wheaton DuPage County	County Complex Parking Lot 421 N. County Farm Road	DuPage County

Long-term Facilities

The following long-term facilities are available for disposal of HHW. Please phone ahead to determine availability and open hours.

Chicago: Household Products and Electronics Collection and Training Center
1150 N. North Branch
Goose Island

Location: (From the Kennedy Expresway, take the Division Street [east] exit.)

Hours: Tuesday, 7 a.m. – noon; Thursday, 2 p.m. – 7. p.m.; and the first Saturday of each month, 8 a.m. – 3 p.m.

This long-term HHW program is the result of an intergovernmental agreement between the Illniois EPA and the City of Chicago's Department of the Environment. This facility accepts batteries, electronics, household chemicals, and even old medicines.

Naperville: 1971 Brookdale Rd.

Location: Fire Station #4

For information: (630)420-6700 #7559

Rockford: 333 Kishwaukee

Location: Rock River Reclamation District

For information: (815)967-6737

Lake County: The Solid Waste Agency of Lake County (SWALCO) currently operates a long-term household chemical waste collection program. Information and a collection schedule can be found on the SWALCO Web site, or by calling (847)336-9340.

For more information, call IEPA's Waste Reduction Unit at (217)785-8604 or check out http://www.epa.state.il.us/land/hazardous-waste/household-haz-waste/hhwc-schedule.html

There are special hazardous material collection events for other nonhousehold types of pesticides:

- Agricultural pesticides are collected at various scheduled "Agricultural Pesticide Clean Sweep" events. Contact the Illinois Department of Agriculture, (217)785-2427, for more information.
- Structural pesticides (those used by professional applicators to control pests in and around structures) are collected at "Structural Pesticide Clean Sweep" sites. Contact the Illinois Department of Public Health, (217)782-4674, for more information. *(Michelle Wiesbrook)*

Farmers Transporting Hazardous Materials

This article is based on a question that was recently posed to University of Illinois PSEP. That question was whether or not farmers are required to have a Commercial Drivers License (CDL) in order to transport placarded amounts of Department of Transportation (DOT)–regulated hazardous materials, including pesticides.

According to federal law, a CDL is required of any driver who drives one of the following:

- A single vehicle with a gross vehicle weight rating (GVWR) over 26,000 pounds
- A combination of vehicles with a combined vehicle gross weight rating (CVGWR) over 26,000 pounds
- Any vehicle that requires placarding

Farm vehicles are exempted from this requirement provided they meet the following criteria:

1. The vehicle is used in agricultural or nursery operations.
2. The vehicle is controlled and operated by a farmer, the farmer's employees, or the farmer's family members.
3. The vehicle is used to transport agricultural products, farm machinery, farm supplies, or a combination of these to and from the farm (this includes nurseries and aquacultures).
4. The vehicle is not operated as a for-hire carrier.
5. The vehicle is used only within 150 air miles of the farm, regardless of whether it travels across state lines.

These exemptions apply to a farmer or family member operating a truck-tractor semitrailer combination or combinations that meet the above criteria, provided the driver is at least 21 years of age and the vehicle has farm license plates.

So, the answer to the above question is no, a farmer is not required to have a CDL to transport placarded amounts of DOT-regulated hazardous materials in most cases. There is, however, an important exception to this. If a farmer transports placarded amounts of DOT-regulated hazardous materials across state lines, then a CDL is required.

An excellent source that was used to write this article is a publication from Purdue University that can be found at http://www.btny.purdue.edu/Pubs/PPP/PPP-68.pdf. Check it out if you are looking for more information on this topic, but keep in mind that some of the laws discussed in that publication apply only

to Indiana. You can also learn more by visiting the following Web site of the Illinois Secretary of State: http://www.cyberdriveillinois.com/departments/drivers/cdl/drexempt_cdl.html. *(Scott Bretthauer and Bruce Paulsrud)*

Honey Bee Colony Collapse Disorder

There has been a recently reported die-off of bee colonies that has been called serious in some parts of the United States; yet in other areas, beekeepers have not been affected. It has not yet been reported in Illinois, although it has been reported in several midwestern states. This is a threatening situation to beekeepers, as well as those who grow and consume many fruits and vegetables that are primarily pollinated by honey bees. This situation is being called Colony Collapse Disorder (CCD). Similar situations have been labeled in the past as Spring Dwindling, Fall Collapse, Autumn Decline, May Disease, or Disappearing Disease. The term, Colony Collapse Disorder, is being used instead for a variety of reasons, including that the situation is not necessarily associated with any particular time of the year and that it is not known whether a disease-causing pathogen is involved.

Symptoms of Colony Collapse Disorder

1. In collapsed colonies:

   a. The complete absence of adult bees in colonies, with no or little build-up of dead bees in the colonies or in the front of those colonies,

   b. The presence of capped brood in colonies,

   c. The presence of food stores, both honey and bee bread. These food stores are not robbed by other bees. When hives are attacked by common hive pests such as wax moth and small hive beetle, the attack is noticeably delayed.

2. In cases where the colony appears to be actively collapsing:

   a. An insufficient number of worker bees is present to maintain the brood.

   b. The workforce seems to be made up of young adult bees.

   c. The queen is present.

   d. The cluster is reluctant to consume provided feed, such as sugar syrup and protein supplement.

Other than general symptoms, essentially nothing is known about the causative agent. Consequently, everything becomes suspect. Nutrition shortages, viral infections, bacterial infections, genetic paternity conflicts, chemical misuse, high mite populations, digestive diseases, amoeba infestations, immune system failure, and fungal infections are common suggestions for possibly causing the unexplained colony deaths.

One possible cause that is being investigated is the impact of pesticides on honey bees, particularly the insecticide imidacloprid. This insecticide is widely used to control insect pests of fruit, vegetables, turf, and landscape plants. It is sold as Merit, Marathon, Provado, Admire, and Gaucho. There is research indicating that honey bees that contact imidacloprid can lose their memory of where their hive is located. This feature is being used by some to explain why CCD-affected hives have no bees in them—that the bees left to forage and never returned to the hive.

However, even though imidacloprid is systemic and moves through the plant, it is known to not get into the flowers of a number of plants. With bees primarily visiting flowers, there are questions as to how the bees would pick up the imidacloprid. Another question is when the honey bees pick up the imidacloprid. Many imidacloprid-treated crops finish flowering by midsummer, allowing time for seed or fruit to be produced and ripen before frost. Honey bees tend to feed in late summer and fall on late-season flowers such as goldenrod and native asters. These plants tend to be most numerous in noncrop areas where insecticides are unlikely to be applied. If the bees died earlier in the season from visiting flowering crops, beekeepers surely would have noticed this when they collected honey from the hives.

There have been media reports that this new problem may have been ongoing for 3 to 4 years. The numerous general symptoms combined with the broad timeframe become encompassing enough to include nearly any dead colony. It is important that hysteria does not overtake scientific investigation. Apparently, CCD has so far been found in bees that have been recently stressed, that is, bees that have been moved to different locations. The problem is being found primarily with migratory commercial beekeepers. In discussions of CCD characteristics, it is frequently said that hobby beekeepers are not as observant as commercial beekeepers; consequently, their colonies that recently died were simply counted as mite-afflicted or caused by a poor queen. However, many hobby beekeepers are very observant of their hives and would have readily observed symptoms as those exhibited by CCD, especially if it had been going on for several years.

Factors to consider when thinking about CCD include the following.

1. Honey bees, though they appear to be domesticated, are nonetheless wild animals.

2. As wild animals, bees are easily stressed as we manage and manipulate colonies for our human good.

3. Stressing bee colonies with migratory activity and general colony manipulation upsets the colony's natural resistance to diseases and pests, making them more vulnerable, not more resistant, to being overrun by a pathogen outbreak.

4. Such an outbreak can have multiple causes, thereby clouding the root cause, colony stress, resulting in conditions like that called Colony Collapse Disorder.
5. Chemical treatments are only short-term fixes for any bee disease. One should always expect side effects from the use of any chemical in bee colonies, particularly honeycomb contamination.
6. The configuration of a modern hive and the configuration of a bee yard are designed for human convenience and are not necessarily conducive to natural honey bee biology.
7. Abnormal concentrations of colony numbers and equipment only serve to concentrate and homogenize bee diseases and pests.
8. Most of the time, the best thing a beekeeper can do for a bee colony is leave it alone.

A recent survey (March 14 to 19, 2007) of Ohio beekeepers found that on average there was a 72% loss of live colonies from September 2006 until March 2007. A closer breakout indicated that beekeepers with fewer than 100 colonies had an average 55% loss, those with 100 to 500 colonies averaged 67%, and those with over 500 colonies averaged 75% loss. There did not appear to be any difference by area of the state. Perhaps the reason why the percentage of loss as the size of operation increases is due to the amount of time spent by the beekeeper per colony. At one time, a 10% or less loss was considered normal, but when parasitic mites became common, that number rose to nearly 30%. The 72% is an unheard of amount.

It is difficult to determine what caused the loss of so many colonies. Fall of 2006 in most parts of Ohio had a dearth of nectar, resulting in poor diets for the honey bee colony. In some cases, the queen reduced egg-laying due to the dearth of nectar, resulting in older bees in the colony and a reduced population. Many beekeepers fed their bees, but it may not have been the proper diet. With various medications being used by the beekeeper to control mites and disease within a colony, perhaps these medications are reacting with each other and affecting the bees. As beekeepers breed bees to resist mites, perhaps they are also affecting bee longevity. There are a number of other factors that could also be related, all of which need to be considered when thinking of CCD. In the above-mentioned survey, the two most often cited reasons beekeepers believed to be the cause of their loss were starvation and small clusters. They believed both of those were brought on by the fall of 2006.

A study group called the CCD research group (comprised of university researchers, state and federal regulatory officials, Cooperative Extension educators, and industry representatives) is working to determine if the cause is related to chemicals, management, breeding stock, environmental, bee stress, or some other factor. The CCD group and Bee Alert Technology are requesting that beekeepers fill out the National Bee Loss Survey, which can be found at hftp://www.beesurvey.com. This survey can be filled out beekeepers with operations of any size, whether or not a loss has been suffered; the more information obtained, the better the chance of finding a cause.

If historical precedent holds true, a causative agent will not be found. Disturbing a colony for no reason other than to see if it is dead from CCD will only hinder the colony. If historical precedents hold true, with the arrival of the spring season, the symptoms will fade into remission. Although the situation is frustrating, no one knows the cause or the scope of this disorder. Don't panic and *do* question much of what you hear. *(Phil Nixon, primarily modified from the CCD research group Web site and articles by James E. Tew and John Grafton in the February and March issues of the* Ohio Info Bee *newsletter.)*

Two Kinds of Right-To-Know Laws

There has been some recent confusion surrounding Illinois's right-to-know law, or is it laws? Indeed, there are now two similarly named laws. Both can pertain to pesticides, but that is not the main focus of either.

One law is the Worker Right-to-Know Law, which requires that employees be informed of the pesticides and other hazardous chemicals in their workplace through worker safety training. This is one of OSHA's regulations (the Occupational Safety and Health Administration). OSHA regulations affect companies with more than 10 employees, and the intent of the law is to ensure that workers are safe. For more information, consult http://www.osha.gov/Publications/osha3084.pdf.

The other right-to-know law focuses on groundwater contamination. It requires Illinois EPA to notify citizens when soil or groundwater has been contaminated and that contamination poses a great health threat to the public. Private well owners are the audience primarily affected by this law. Early notification is given to them so they can test their water, which is often used for drinking, for contaminants. For detailed information about this law, which went into effect in January 2006, go to http://www.epa.state.il.us/community-relations/right-to-know/index.html. According to the fact sheet posted at this site, "Notifications will be given to owners of private wells that are within 200 feet of any measured or modeled groundwater contamination from a given site. Notice will also be given to property owners where soil contamination from a site has been identified above state health-based cleanup values. In addition, persons or facilities within 1,000 feet of a contaminated site with an interest in knowing more about the situation

may be included in a notice (e.g., nursing home or school administrator)." So how does the new law compare to what was done before? The new law includes additional types of contamination sites and should result in improved communications with affected citizens. Their new use of GIS (geographic information system) should improve accuracy as well. *(Michelle Wiesbrook)*

Farewell to Bruce Paulsrud

After being a member of the Pesticide Safety Education Program at University of Illinois for nearly 11 years, Bruce Paulsrud is moving on to a new career.

Since 1996, Bruce has provided expertise in plant pathology for a wide variety areas, including field crops, ornamental plants, turfgrass, and indoor plants. He also provided expertise in grain facility pest management and seed treatment.

Bruce served as the Private PSEP coordinator for seven years, and was also involved with Worker Protection Standard training. He was responsible for coordinating the schedule for manual and workbook revisions, and worked as a liaison between the Illinois Department of Agriculture, the U.S. Environmental

Protection Agency, and PSEP. He was actively involved in the American Association of Pesticide Safety Educators, the national professional organization for PSEP.

Within University of Illinois Extension, he has served as a team co-chair for the Integrated Pest Management program development team and has been active in many other facets of Extension. Bruce also assisted at the University of Illinois Plant clinic on occasion. Most recently, Bruce was involved in the creation of EZRegs, a website designed to help understand many of the laws related to agriculture and the green industry.

Bruce was always enthusiastic and dedicated to the PSEP mission. He has been a tremendous asset to the PSEP team, and he will be greatly missed. His new career will be as a Financial Representative with Thrivent Financial for Lutherans in Rantoul, Illinois, where he says his mission will be the same as it was with PSEP—to help people. His PSEP colleagues wish him success in his new endeavors. *(Scott Bretthauer)*

The development and/or publication of this newsletter has been supported with funding from the Illinois Department of Agriculture.

Michelle L. Wiesbrook, Extension Specialist, Pesticide Application Training and Horticulture

The *Illinois Pesticide Review* is published six times a year on the Web at **http://www.pesticidesafety.uiuc.edu/**

University of Illinois Extension
Pesticide Safety Education Program
1201 S. Dorner Drive
Urbana, IL 61801